

### **REMARKS**

An excess claim fee payment letter is submitted herewith for three excess independent claims.

Claims 1-20 are all the claims presently pending in the application. Claims 1-17 have been amended to more particularly define the invention. Claims 18-20 have been added to further define the scope of coverage for the unique features of the present invention.

It is noted that Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Applicant gratefully acknowledges that claims 1-3, 5-8, 10-12, and 14-17 are allowed. However, Applicant respectfully submits that all of the claims are allowable.

Claim 4 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Okazawa, et al. (U.S. Patent No. 6,035,414). Claims 9 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Okazawa, et al. in view of Kusano (U.S. Patent N. 5,365,511).

These rejections are respectfully traversed in the following discussion.

#### **I. THE CLAIMED INVENTION**

As described in, for example, by claim 4, the claimed invention is directed to a system having cross-bar switches for connecting Central Processing Units (CPUs) and a memory within a computer system or for connecting nodes in a computer system

including a plurality of nodes. The cross-bar switch system with redundancy includes N+1 cross-bar switches inclusive of N cross-bar switches (e.g., in a non-limiting exemplary embodiment, those that are indispensable for the system) and one redundant cross-bar switch.

Selection circuits are provided at inputs and outputs of the cross-bar switches. A means, operable when the system fails, performs control in such a manner that a cross-bar switch that has failed is taken out of service and the redundant cross-bar switch is placed in service by controlling the selection circuits by a failure processing circuit after the system is restarted. The failure processing circuit recognizes that the cross-bar switch has failed. Each of the selection circuits selects and outputs one of its two inputs and, when one cross-bar switch fails, takes the failed cross-bar switch out of service.

Conventional methods, as described beginning at line 20 of page 2 of the specification, either have no provisions for cross-bar switch failure, are costly because complete redundancy is provided, or cause longer time delay upon switching.

The claimed invention, on the other hand, provides a cross-bar switch system in which rapid recovery is achieved at low cost. A key feature of the present invention is that each of the selection circuits of the cross-bar switch system selects and outputs one of its two inputs and, when one cross-bar switch fails, takes the failed cross-bar switch out of service.

## II. THE PRIOR ART REJECTIONS

The Examiner alleges that US Patent 6,035,414 to Okazawa et al. anticipates the present invention described by claim 4 and, when modified by US Patent 5,365,511 to

Kusano, renders obvious the present invention defined by claims 9 and 13.

Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by Okazawa.

That is, as conceded by the Examiner, the Okazawa fails to teach or suggest that each of the selection circuits selects and outputs one of its two inputs and, when one cross-bar switch fails, takes the failed cross-bar switch out of service.

Kusano is relied upon for demonstrating a register and does not overcome this deficiency of Okazawa.

Hence, turning to the clear language of independent claim 4, in Okazawa there is no teaching or suggestion of: "... each of said selection circuits selects and outputs one of its two inputs and, when one cross-bar switch fails, takes the failed cross-bar switch out of service."

Therefore, the Examiner is respectfully requested to withdraw this rejection.

### **III. FORMAL MATTERS AND CONCLUSION**

In view of the foregoing, Applicant submits that claims 1-20, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

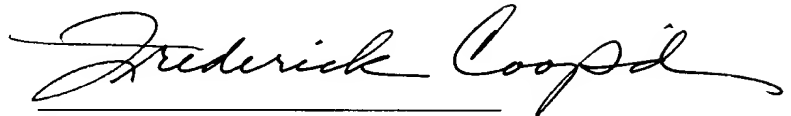
Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

Serial No. 09/800,905  
Docket No. NEG-199 US

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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